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BULLETIN
OF THE
TORREY BOTANICAL CLUB.

Vol. XVI.] New York, November 8, 1889. [No. 11.

The A. A. A. S. Botanical Club's Trip to the Lakes of Muskoka, Ontario, August 31 to September 2, 1889.*

The excursion to Muskoka Lake, to which the Botanical Club of the Association was invited, proved to be one of unusual interest. Probably as many as fifty members of the Association participated. A portion found their hotel accommodations at Port Cockburn, at the head of the lake, and a portion at Port Sandfield, near the center. The weather was faultless.

Muskoka Lake is so irregular in outline and so narrowed in places that it has been found convenient, in local speech, to call its two northerly divisions Lake Joseph and Lake Rousseau, reserving to the southerly portion the name of Muskoka. The lake lies between 44° 50′ and 45° 20′ N. latitude, and between 79° 20′ and 79° 70′, longitude W. from Greenwich. Its level was not precisely ascertained, but probably it is not more than 150 feet above Lake Huron, into which its waters are discharged, at about 740 feet above tide water. Its basin is granitic, the rock forming in many places a precipitous shore. The soil of the country immediately around the shore is very thin, although sufficient to support a forest considerably dense. Fires and the axe have destroyed much of the original timber, but a second growth has already supplied it. Upon the borders of the lake very little ground has been put under cultivation. In fact, there would seem to be but little reason why agriculture should be there attempted. Deer and bear are reported as abundant in places. At Bala, the primitive forest is said still to continue.

The northerly boundary line between the State of New York and the Province of Ontario (40° N. lat.), if extended westerly, would pass through the lake, nearly at its center. The elevations which surround the lake are scarcely more than 100 or 150 feet above its surface. It may be safely inferred from this fact that the mean annual temperature of the Muskoka region is probably not so low as that of the country around Echo Lake in New Hampshire. In fact, Chautauqua Lake, distant two hundred miles to the southward, has a lower mean annual temperature. Few plants characterize the flora of the region which do not also belong to Western New York. The change of the proportions in which the species appear, rather than any change of the species themselves, seem to be the chief indication of its more northerly character. Thus, for instance, although no species of *Betula* was noted at Muskoka, which does not also belong to Western New York, the birches constitute a much larger portion of the forest than they do south of Lake Ontario. On the other hand, although all the maples of Western New York are to be seen in the Muskoka region, they certainly do not constitute so large a portion of the forest as they do in Niagara and Erie Counties, N. Y. There can be no doubt that in this portion of Canada the summers are later and the winters earlier than across Lake Ontario. It is a significant fact that the peach seldom ripens, even in the vicinity of Toronto, whilst in the neighborhood of Hamilton distant only forty miles, it is a fruit maturing almost every year.

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*At the session of the Club held on the steamer returning to Toronto, Monday September 1, a committee was appointed, consisting of Hon. David F. Day, Prof. T. J. Burrill and the editor of the BULLETIN, to prepare a report on the excursion. The senior member of the Committee has prepared the report which is here submitted.

The more noteworthy plants which were observed in the excursion were mainly aquatics: *Subularia aquatica*, *Elatine Americana*, *Lobelia Dortmanna*, *Utricularia intermedia*, *Limnanthemum*, *Eriocaulon septangulare*, and an *Isoetes*, probably *I. Braunii*. Notwithstanding the diligence of the Canadian botanists, all these plants were new to the Province of Ontario. They are not to be regarded as very abundant in the places of their discovery. Among terrestrial plants which arrested attention, *Polygonum tenue*, found growing upon rocky hillsides, and *Aster nemoralis* were the most important. The *Subularia* and *Elatine* were found growing under water, upon a sandy bottom, (Slater's Bay, near Port Sandfield) and were looked for elsewhere in vain.

The following list embraces all the plants which were reported to the Club as having been observed:

Clematis Virginiana,	Port Sandfield.
Anemone Hepatica,	Toronto.—J. T. Cowell.
Anemone acutiloba,	Port Sandfield.
Ranunculus Pennsylvanicus,	" "
Ranunculus acris,	" "
Coptis trifolia,	Frequent.
Brasenia peltata,	Port Sandfield.
Castalia odorata,	" "
Castalia tuberosa,	Toronto.
Nymphæa advena,	Common.
Sarracenia purpurea,	Port Sandfield.
Cardamine hirsuta,	Lake Rousseau.
Camelina sativa,	Gravenhurst.—Thos. Meehan.
Corydalis sempervirens,	Port Sandfield.
Drosera intermedia,	" "
Elatine Americana,	" "
Silene noctiflora,	" "
Silene antirrhina,	" "
Geranium Carolinianium,	Port Cockburn.—Mrs. M. L. Moody.
Geranium Robertianum,	Port Sandfield.
Rhus typhina,	Toronto.
Rhus Toxicodendron.	Toronto.
Vitis æstivalis.	Port Sandfield.
Acer Pennsylvanicum.	" "
Acer spicatum.	" "
Acer saccharinum.	" "
Acer saccharum.	" "
Acer rubrum.	" "
Trifolium repens.	" "
Trifolium hybridum.	" "
Trifolium procumbens.	Toronto.
Melilotus officinalis.	R. R. track bet. Toronto and Gravenhurst
Melilotus alba.	" " " "
Medicago lupulina.	Gravenhurst.
Prunus Pennsylvanica.	Port Sandfield.
Prunus serotina.	Toronto.
Spiræa salicifolia.	Port Sandfield.
Geum Virginianum.	" "
Potentilla Norvegica.	" "
Potentilla palustris.	" "
Rubus villosus.	" "
Pyrus Americana.	Frequent.
Pyrus arbutifolia, var. *melanocarpa*.	Port Cockburn.
Amelanchier Canadensis. var. *oblongifolia*.	Port Sandfield.
Ribes Cynosbati.	" "
Saxifraga Virginiensis.	" "
Epilobium spicatum.	Between Toronto and Gravenhurst.

E. palustre,	
var. *lineare.*	Port Sandfield.
E. coloratum.	Toronto.
Rhexia Virginica.	Bala.—Rev. Mr. Bragdon.
Micrampeles echinata.	Port Sandfield. Perhaps not indigenous.
Cicuta bulbifera.	Gravenhurst.
Aralia hispida.	Port Sandfield.
Cornus stolonifera.	Frequent.
Cornus circinata.	Port Sandfield.
Cornus Canadensis.	" "
Linnæa borealis.	Lake Rousseau.
Diervilla trifida.	Port Sandfield.
Sambucus Canadensis.	" "
Sambucus pubens.	" "
Viburnum lantanoides.	Lake Rousseau.
Viburnum acerifolium.	Port Sandfield.
Galium circæzans.	" "
Mitchella repens.	Lake Rousseau.
Eupatorium ageratoides.	Port Sandfield.
Aster corymbosus.	" "
Aster macrophyllus.	" "
Aster paniculatus.	" "
Aster lævis.	" "
Aster Novæ Angliæ.	Toronto.
Aster nemoralis.	Port Sandfield.
Aster umbellatus.	" "
Erigeron Canadensis.	" "
Erigeron ramosus.	" "
Solidago bicolor.	" "
Solidago hirsuta.	" "
Solidago nemoralis.	Between Toronto and Gravenhurst.
Solidago Canadensis.	Port Sandfield.
Solidago lanceolata.	Toronto.
Ambrosia artemisiæfolia.	"
Helianthus decapetalus.	"
Bidens frondosa.	Port Sandfield.
Bidens connata.	Gravenhurst.
Anthemis Cotula.	Toronto.
Achillæa Millefolium.	Port Sandfield. White and pink-flowered; the European form at Toronto.
Chrysanthemum Leucanthemum.	Between Toronto and Gravenhurst.
Artemisia Canadensis.	Near Toronto.
Artemisia biennis.	Toronto.
Erechthites hieraciifolia.	Lake Rousseau.
Cnicus lanceolatus.	Gravenhurst.
Lappa officinalis.	Between Toronto and Gravenhurst.
Hieracium Canadense.	Port Sandfield.
Prenanthes alba.	" "
Taraxacum Dens-leonis.	Toronto and elsewhere.

Sonchus arvensis.	Toronto.
Lobelia Dortmanna.	Port Sandfield.
Oxycoccus macrocarpus.	" "
Vaccinium Pennsylvanicum.	" "
Vaccinium Canadense.	" "
Cassandra calyculata.	" "
Pyrola secunda.	Near Port Cockburn.
Chimaphila umbellata.	" Toronto.
Ilex verticillata.	Port Sandfield.
Nemopanthes mucronata.	Gravenhurst.
Plantago major.	Toronto etc.
Plantago Rugelii.	Port Sandfield.
Plantago lanceolata.	Toronto.
Lysimachia terrestris.	Port Sandfield.
Lysimachia quadrifolia.	Near Toronto.
Limnanthemum lacunosum.	Lake Muskoka.
Utricularia intermedia.	Port Sandfield.
Utricularia cornuta.	" "
Verbascum Thapsus.	Gravenhurst.
Linaria vulgaris.	"
Verbena hastata.	Near Toronto.
Verbena urticifolia.	" "
Phryma Leptostachya.	Port Sandfield.
Mentha Canadensis.	" "
Calamintha Clinopodium.	" "
Brunella vulgaris.	" "
Scutellaria lateriflora.	Lake Rousseau.
Echinospermum Lappula.	Gravenhurst.
Phytolacca decandra.	Near Toronto.
Chenopodium album.	Various places.
Chenopodium hybridum.	Port Sandfield.
Amarantus retroflexus.	Gravenhurst.
Polygonum Persicaria.	Port Sandfield.
Polygonum Pennsylvanicum.	" "
Polygonum tenue.	Rocky hill near Port Sandfield.
Polygonum cilinode.	Port Sandfield.
Sassafras officinale.	Near Toronto.
Shepherdia Canadensis,	Various places.
Euphorbia Helioscopia.	Toronto.
Ulmus Americana.	Near Toronto.
Quercus rubra.	Frequent.
Quercus palustris.	Near Toronto.
Quercus alba.	Port Sandfield.
Fagus ferruginea.	Near Toronto.
Corylus rostrata.	Port Sandfield.
Myrica Gale.	Lake Shores.
Betula lutea.	Port Sandfield.
Betula papyracea.	" " and elsewhere.
Alnus incana.	Gravenhurst and Port Sandfield.

Salix cordata,	Gravenhurst.
Salix lucida.	Port Sandfield.
Populus tremuloides.	“ “
Populus grandidentata.	Frequent.
Populus balsamifera.	“
Pinus resinosa.	Lake Joseph.
Pinus Strobus.	Port Sandfield.
Picea Mariana.	Near Toronto.
Larix laricina.	Port Sandfield.
Thuja occidentalis.	Frequent.
Potamogeton natans.	Lake Rousseau.
Alisma Plantago.	
var. *Americanum.*	Gravenhurst.
Habenaria bracteata.	Port Cockburn.
Smilax herbacea.	Port Sandfield.
Medeola Virginica.	“ “
Trillium grandiflorum.	“ “
Trillium erythrocarpum.	Frequent.
Clintonia borealis.	Lake Rousseau.
Unifolium Canadense.	Port Sandfield.
Juncus pelocarpus.	“ “
Juncus bufonius.	“ “
Juncus Canadensis.	“ “
Pontederia cordata.	Lake Rosseau.
Eriocaulon septangulare.	Port Sandfield.
Scirpus validus.	“ “
Scirpus atrovirens.	“ “
Phleum pratense.	“ “
Muhlenbergia sylvatica.	Gravenhrust.
Brachyelytrum aristosum.	Port Sandfield.
Oryzopsis asperifolia.	“ “
Danthonia spicata.	“ “
Bromus Kalmii.	Port Sandfield.
Phragmites communis.	Near Toronto.
Triticum violaceum.	Port Sandfield.
Elymus Canadensis.	“ “
Deschampsia flexuosa.	Toronto.
Panicum filiforme.	“
Panicum capillare.	Port Sandfield.
Setaria verticillata.	“ “
Equisetum palustre,	“ “
Polypodium vulgare.	“ “
Adiantum pedatum.	“ “
Pteris aquilina.	“ “
Phegopteris Dryopteris.	Bala.—Rev. Mr. Bragdon.
Aspidium marginale.	Port Sandfield.
Woodsia Ilvensis.	“ “
Lycopodium annotinum.	Lake Rousseau.
Isoetes Braunii.	Port Sandfield.